Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE
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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES
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<u>Ex parte</u> RICHARD KOO, DALE SKEEN, and ALEXANDER SIEGEL
_____

Appeal No. 2003-0422
Application No. 08/818,355
_____

HEARD: JULY 15, 2003
_____

Before FLEMING, GROSS, and LEVY, <u>Administrative Patent Judges</u>.

LEVY, <u>Administrative Patent Judge</u>.

<u>DECISION ON APPEAL</u>

This is a decision on appeal under 35 U.S.C. § 134 from the examiner's final rejection of claims 1-20, which are all of the claims pending in this application.

<u>BACKGROUND</u>

Appellants' invention relates to an event driven communications system. An understanding of the invention can be

derived from a reading of exemplary claim 1, which is reproduced

as follows:

1. A publish-subscribe communications system comprising:

a plurality of channels for transmitting data furnished by publishers of data to subscribers to data,

each channel including means for accepting data published to the channel and furnishing the data accepted to subscribers to the channel,

a channel including means for accepting data for transmission by the channel from another channel.

The prior art references of record relied upon by the

examiner in rejecting the appealed claims are:

Aldred et al.   5,649,105   Jul. 15, 1997
 (Aldred)   (102(e) date is June 27, 1994)

Ravindran, K., "Object-Oriented Communication Structures for Multimedia Data Transport", vol. 14, no. 7, Sep. 1996, pg. 1360-1375

Claims 1-20 stand rejected under 35 U.S.C. § 103 as being

unpatentable over Ravindran in view of Aldred.

Rather than reiterate the conflicting viewpoints advanced by the

examiner and appellants regarding the above-noted rejection, we

make reference to the examiner's answer (Paper No. 23, mailed

August 26, 2002) for the examiner's complete reasoning in support

of the rejection, and to appellants' brief (Paper No. 21, filed

March 25, 2002) and reply brief (Paper No. 25, filed October 28,

2002) for appellants' arguments thereagainst. Only those

arguments actually made by appellants have been considered in

this decision. Arguments which appellants could have made but

chose not to make in the brief have not been considered. <u>See</u> 37

CFR 1.192(a).

<u>OPINION</u>

In reaching our decision in this appeal, we have carefully

considered the subject matter on appeal, the rejection advanced

by the examiner, and the evidence of obviousness relied upon by

the examiner as support for the rejection. We have, likewise,

reviewed and taken into consideration, in reaching our decision,

appellants' arguments set forth in the briefs along with the

examiner's rationale in support of the rejection and arguments in

rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us,

that the evidence relied upon and the level of skill in the

particular art would not have suggested to one of ordinary skill

in the art the invention as set forth in claims 1-20.

Accordingly, we reverse, essentially for the reasons set forth by

appellants. We begin with independent claims 1, 5, and 12.

In rejecting claims under 35 U.S.C. § 103, it is incumbent

upon the examiner to establish a factual basis to support the

legal conclusion of obviousness. See In re Fine, 837 F.2d 1071,
1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the
examiner is expected to make the factual determinations set forth
in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467
(1966), and to provide a reason why one having ordinary skill in
the pertinent art would have been led to modify the prior art or
to combine prior art references to arrive at the claimed
invention. Such reason must stem from some teaching, suggestion
or implication in the prior art as a whole or knowledge generally
available to one having ordinary skill in the art. Uniroyal,
Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434,
1438 (Fed. Cir. 1988); Ashland Oil, Inc. v. Delta Resins &
Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed.
Cir. 1985); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d
1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings
by the examiner are an essential part of complying with the
burden of presenting a prima facie case of obviousness. Note In
re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir.
1992). If that burden is met, the burden then shifts to the
applicant to overcome the prima facie case with argument and/or
evidence. Obviousness is then determined on the basis of the
evidence as a whole. See id.; In re Hedges, 783 F.2d 1038, 1039,
228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d

1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re

Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976).

    The examiner's position (answer, page 3) is that Ravindran's

client-server framework is a publish-subscribe communications

system comprising a plurality of channels for transmitting data

furnished by publishers of data to subscribers of data. The

examiner adds (id.) that "[r]avindran is silent on each channel

including means for accepting data published to the channel and

furnishing the data accepted to subscribers to the channel, a

channel including means for accepting data for transmission by

the channel from another channel." To overcome the deficiencies

of Ravindran, the examiner turns to Aldred for a teaching of a

communication system providing a plurality of channels, with each

channel having a sending port and a receiving port. According to

the examiner (id.) it would have been obvious to incorporate the

channel with a transmitting port and a receiving port as taught

by Aldred into Ravindran's system, in order to improve the

capability of each channel on the client-server system. With

respect to independent claims 5 and 12, the examiner states that

these claims have similar limitations as claim 1, and are

rejected for the same reasons as claim 1.

    Appellants assert (brief, page 5) that the references fail

to disclose, inter alia, the claimed publish-subscribe system,

channel as defined in appellants specification, the function of

allowing channels to publish to other channels, and the concept

of channel objects. It is further argued (id.) that the

requisite motivation for combining the references does not exist.

     From our review of Ravindran, we find that Ravindran is

directed to object-oriented communication for multimedia data

transport. The object-orientation decomposes an application-

level data transport into a set of network channel objects, with

each channel object handling a separate data stream (page 1360,

column 1). The function of the end-to-end communication system

is to collect the multimedia data generated by source entities,

move the data through the network, and deliver the data at

destination entities for consumption (page 360, column 2).

Architecturally, the communication system resides on top of the

backbone network (id.). A connection enfolds one or more

channels, i.e., network paths, along which various data streams

in a multimedia information flow. The user views a connection

object as an end-point communication, while the network views the

set of channel objects as providing independent data paths, each

possibly with different characteristics. For example, a video

telephone connection has two channels, one for video data and one

for audio data. These channels may be realized on different

paths through the network based upon bandwidth availability or

may be multiplexed on the same path (page 1362). In the video-

phone connection, the conversation may continue on the audio

channel even if the video channel fails (page 1363, column 2).

Sometimes, a quality degradation on a channel may affect the

other channels. In a high fidelity stereo, a sustained data loss

in one audio channel may cause the channel to be aborted, which

in turn may cause the other audio channel to be aborted.

However, the conversation can continue on the audio channel.

Such control relationships are enforced by the transport

protocol, and would influence resource allocation of the network,

e.g., bandwidth allocation (page 1364, column 1). The object-

oriented structure of the Multimedia Communications System (MCS)

leaves the door open for a variety of paradigms and protocols for

resource management, data transport and synchronization (id.).

The Multimedia Transport Layer (MMTL) acts as a server and the

application (or user) acts as a client. The MMTL controls the

allocation of resources for data transport over various channels

of a connection, and for synchronization of data flowing in the

channels (page 1368, column 2).

     As shown in figure 10, (page 1371) the failure of channel

ch_2 and the degradation of channel ch_1 may cause the user to

redefine the control relationship between ch_1, ch_2, and ch_3. This

manifests as a flexible support for dynamic reconfiguration of
end-to-end communications.

    Ravindran further discloses (page 1372, column 1) that the
transport model can be used to support applications requiring
audio-video conferencing on top of current networks that provide
only audio conferencing facilities.

    From the disclosure of Ravindran, we agree with the examiner
that Ravindran is silent as to a channel including means for
accepting data for transmission from another channel. However,
we agree with appellants (reply brief, page 3) that CORBA is an
architecture that enables objects to communicate with one another
independent of programming language or operating system, that
CORBA encompasses a great deal of standards and specifications,
and that by using CORBA dynamic API, Ravindran makes clear that
the system is directed to a client-server system using resource
based channels. Thus, we find that Ravindran is not directed to
a publish-subscribe system, but rather to a client-server system,
and does not disclose or suggest that a channel object can
publish to another channel object in a publish-subscribe system.
We additionally find from the disclosure of Ravindran that the
channels are bound to specific media streams, such as a video
stream or an audio stream.

Turning to Aldred, we find that Aldred is directed to a programmable workstation for collaborative working in a network. Collaborative application support system software 17 is used for the development of application programs for creating a collaborative working environment (col. 1, lines 17 and 37-41). Application Programming Interface (API) 20 allows applications 18 to initiate peer applications and share resources on a variety of hardware and software platforms located on nodes across diverse and complex communications networks. API allows defining of multiple dedicated logical data channels between shared applications, independently of the structure of the underlying physical network (col. 4, lines 1-8). A collection of applications sharing is called a sharing set (col. 5, lines 9 and 10). Individual applications can cease sharing at any time, withdrawing from a sharing set. As shown in figure 5, applications in a sharing set such as 40, 41 and 42 can establish data communication links with one another known as channels. Channels such as 43 and 44 are logically dedicated and uni-directional pipes, with application specified transmission characteristics (col.5, lines 34 and 35, and 40-46). A channel is always defined by the sending application and it goes from a sending application to a receiving application. The ends of channels are known as ports. All channels have one sending port

and one receiving port. There may be no direct mapping between
the logical channel structure seen by the aware applications and
the physical communications network (col. 5, lines 47-55). This
allows video channels, voice channels and other data channels to
be sensibly established. Four types of channels are supported:
standard, merged, synchronous, and serialized (col. 6, lines 16
and 17).

     From the disclosure of Aldred, we agree with the examiner
that the channels are software objects. However, we agree with
appellants that the channels are dedicated mechanisms for
applications to communicate in a synchronous fashion. We find no
teaching or suggestion that Aldred is directed to a publish-
subscribe system. Nor do we find any teaching or suggestion in
Aldred that a channel may subscribe to another channel.

     We are not persuaded by the examiner's assertion (answer,
page 6) that means for accepting publishers and subscribers can
be other channels is disclosed by Aldred (col. 13, lines 22-33)
and by Ravindran (page 1368, column 2). We find that the portion
of Aldred relied upon by the examiner refers to reallocating
bandwidth across channels. However, we find no teaching or
suggestion as to how this reallocation of resources teaches or
suggests channel objects including means for accepting publishers
and subscribers which are channel objects; i.e., channels

subscribing to other channels. Similarly, we find that the

portion of Ravindran relied upon by the examiner relates to

dynamic reconfiguration of communications due to changes in

internal conditions, such as depletion of buffers due to onset of

congestion. We find no teaching or suggestion of a channel

subscribing to another channel. Thus, even if we combined the

teachings of Ravindran and Aldred, the resultant combination

would not result in the invention set forth in appellants'

claims.

From all of the above, we find that the examiner has failed

to establish a prima facie case of obviousness of independent

claims 1, 5, and 12. Accordingly, the rejection of independent

claims 1, 5, and 12, as well as claims 2-4, 6-11, and 13-20,

dependent therefrom, is reversed.

CONCLUSION

To summarize, the decision of the examiner to reject claims

1-20 under 35 U.S.C. § 103 is reversed.

REVERSED

MICHAEL R. FLEMING   )
Administrative Patent Judge   )
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) BOARD OF PATENT
ANITA PELLMAN GROSS   )   APPEALS
Administrative Patent Judge   )   AND
) INTERFERENCES
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STUART S. LEVY   )
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